PATENT

INSTITUT FRANÇAIS DU PÉTROLE

PROCESS COMBINING HYDROISOMERISATION AND SEPARATION USING A ZEOLITIC ADSORBENT WITH A MIXED STRUCTURE FOR THE PRODUCTION OF HIGH OCTANE NUMBER GASOLINES

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ABSTRACT

A process for producing a gasoline stock with a high octane number comprises at least one hydroisomerisation section and at least one section for separating multibranched paraffins contained in a feed constituted by a C5 to C8 cut. The separation section functions by adsorption and contains at least one zeolitic adsorbent with a mixed structure with principal channels with openings defined by a ring containing 10 oxygen atoms and secondary channels with openings defined by a ring of at least 12 oxygen atoms, the secondary channels only being accessible to the feed to be separated via the principal channels. The separation section comprises at least one unit and produces at least two fluxes, a first flux (8) that is rich in multibranched paraffins, possibly in naphthenes and aromatics, which is sent to the gasoline pool, optionally in a first version of the process a second flux that is rich in linear and monobranched paraffins that is recycled to the inlet to the hydroisomerisation section, or optionally in a second version of the process (fig. 2.1A), a second flux (30) that is rich in linear paraffins that is recycled to the inlet to a first hydroisomerisation section (2) and a third flux (39) that is rich in monobranched paraffins that is recycled to the inlet to a second hydroisomerisation section (3).

Figure 2.1A to be published.